

# Anchorage Amateur Radio Club

## General Membership Meeting August 6th

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#### AARC web page & Email contact addresses:

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#### News Letter Submissions, Information or corrections:

Submissions must be received 2 weeks before meeting

Email [KL0CY@arrl.net](mailto:KL0CY@arrl.net) Facsimile 907-338-4791

Mail 7013 Trafford Ave Anchorage 99504

#### KL7G CODE PRACTICE SCHEDULE

Schedule 7 00am, 10 00am, 4 00pm, 7 00pm, 10 00pm  
AK time, every day Frequencies 3575 kHz, 7075 kHz &  
145.35 MHz Sending Speeds 22 wpm, 15 wpm, 7 wpm

#### Nets in Alaska:

The following nets are active in South-central Alaska

Alaska Sniper's Net 3 920 MHz 6 00 PM daily

Alaska Bush Net 7 093 MHz 8 00 PM daily

Alaska Motley Net 3 933 MHz 9 00 PM daily

Alaska Pacific Emergency Preparedness Net 14 292 MHz  
8 00 AM M-F

QCWA net 146 97/37 repeater Sundays 8 00 PM local

850 No Name Net 146 85/25 repeater Sundays 8 00 PM

Son of Sideband Net 144 20 USB Mondays 9 00 PM local

Big City Simplex Net 146 520 FM Tuesdays 8 00 PM local

ARES net 147 30/90 MHz Thursdays at 8 00 PM local

PARKA net 147 30/90 MHz Thursdays at 9 00 PM local

#### Anchorage & Mat Valley Area Repeaters

KL7AA systems at Flattop Mt., 2,200 ft

146 34/94 MHz, 80 watts, autopatch, 100/141.3 Hz PL

223 34/224 94, 25 watts, no patch, no PL

444.70/449.70, 25 watts, autopatch, 100/141.3 PL

KL7ION at Mt. Gordon Lyon 4,700 ft

147.30/90 MHz - 80 watts, no patch, no PL

KL7AA, Mt. Alyeska, 2,400 ft

146.16/76 MHz, 25 watts, no patch, 141.3 Hz PL

KL7CC, Anchorage Hillside, SCRC club

temporary down 146.97/37 MHz, autopatch, 103.5 Hz PL

KL7DJE at Grubstake Peak, 4,500 ft

147 09/69 MHz, 25 watts, no patch, 100 Hz PL

444.925/449.925, 10 watts, no patch, 141.3 Hz PL

KL7JFU, KGB road, MARA club

146.85/25, autopatch, no PL

KL7AIR Elmendorf, EARS

147.27 simplex pending repeater frequency change

KL7G West Anchorage & Events

449 65/444 65 MHz, patch, no PL

#### Anchorage & Mat Valley Simplex Frequencies

146 52 Mhz Calling and Emergency frequency

147 57 / 447 57 (crossband linked) HF spotters & chat

146 49 Mhz Anchorage area simplex chat

146 41 Mhz Mat Valley simplex chat



— HOT LINKS —

Internet Web links, the favorites from our readers

AARC <http://kl7aa.akconnect.com>

SCRC <http://www.servcom.com/worcester/scrc.htm>

EARS <http://www.qsl.net/kl7air>

KL7J <http://www.alaska.net/~buchholz>

Fairbanks AARC

<http://fidlm1.mac.uafson.alaska.edu/aarc/aarc.html>

Yukon Amateur Radio Association

<http://www.klondike.com/yara/index.html>

HAARP Project

<http://server5550.itd.nrl.navy.mil/projects/haarp/>

<<Amateur Radio Reference Library>>

<http://www.area-ham.org/library/libindex.html>

Hamradio <http://www.hamrad.com/>

Solar Terrestrial Activity <http://209.130.27.95/solar/>

ARRL <http://www.arrl.org/>

Propagation Report Recording 566-1819

*please let us know if there are other club pages or good starting points that should appear here*

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Factory authorized service for Kenwood, ICOM, Yaesu, Alinco, Amateur radio equipment

Call Jim Wiley, KL7CC (907) 338-0662

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**NEWSLETTER ARTICLES,** All articles from members and interested persons are very welcome. If you wish to submit any articles, jokes, cartoons, please have it typed or neatly handwritten. It can be submitted by computer disk, fax, or E-mail to the newsletter editor at the address listed on the cover. Submissions must be in the hands of the editor at least two weeks prior to the meeting.

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**Regular HAM Gatherings:**

\* **Tuesdays, 11:30 AM to 1:00 PM:** Join the gang for lunch and an eyeball QSO at the Royal Fork, Penland Park, East.

**Saturdays, 7:30 AM:** Here is a great way to get started on the week-end come and meet with some of the locals and have a great breakfast at Phillips Restaurant, at the corner of Arctic and International. Great Fun.

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**This Month's Speaker**

Frank Mengel, the chief engineer of KAKM has invited the club to tour KAKM's facilities and to a demonstration of HDTV. KAKM is located on the APU campus.

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**THIS MONTH'S EVENTS**

**August X: EARS general meeting at 7:00 PM** 1st Tuesday of the month, in the basement of Denali Hall (building 31-270) on Elmendorf AFB. Talk in on 147.27 simplex. The are not held during the summer and will resume on September 7, 1999.

**August 4: VE License Exam 6:30 PM,** 1<sup>st</sup> Wednesday of the month, Carr-Gottstein Building, APU Campus. Bring photo ID, copy of license (if any) and any certificates of completion.

**August 6: AARC general meeting at 7:00 PM** 1<sup>st</sup> Friday of the month in the Carr-Gottstein Building, on the APU Campus. Talk in will be on 147.300.

**August 14: ARES Planning Committee 09:30 AM to 12:00 PM.** 2<sup>nd</sup> Saturday of the month. Will be held at the Boniface Bingo Hall in the small strip mall on Boniface and the Glen Hwy.

**August 14: VE License Exams at 2:00 PM.** 2<sup>nd</sup> Saturday of the month at Hope Cottage 540 W International in the Board Room. Be sure to bring photo ID, copy of license (if any) and any certificates of completion.

**August 10: AARC Board meeting at 7:00 PM** 2<sup>nd</sup> Tuesday of the month at Phillips International Inn, Arctic & International. No host dinner at 6:00 PM for those who want to eat.

**August 13: SCRC general meeting at 7:00 PM** the 2<sup>nd</sup> Friday of the month in room 220, Business Ed Bldg, UAA campus. Talk in on 147.57 simplex.

**August 21: PARKA Meeting at 11:00 AM.** 3<sup>rd</sup> Saturday of the month at Peggy's, across from Merrill Field.

**August 27: MARA meeting at 7PM** the last Friday of the month at the MTA office in Palmer.

⇒ **September 25 & 26: HAMFEST 1999** featuring Gordon West, Augie Hiebert, Greg Milnes at Kincaid Park, same as last year.

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## **GORDON WEST, AUGIE HIEBERT AND MORE AT THE 1999 AARC HAMFEST from Lil Marvin, NL7DL**

Once again, it's time to get ready for the annual Anchorage Amateur Radio Club Hamfest which will take place on Saturday and Sunday, September 25th and 26th at Kincaid Park, the same place where it has been for the last several years. If you haven't yet marked it on your calendar, this is your second reminder.

As we told you in last month's newsletter, Gordon West will be returning to the Hamfest for the third year in a row. This year, along with his regular demonstrations, banquet speeches, etc., Gordon has offered to teach an all-day code class for a fee, to all interested would-be HF hams. If you are interested in the code class, contact Gordon directly at 1-714-549-5000, Monday through Friday from 10:00 AM to 4:00 PM PST, or contact him on his 24-hour fax at 1-714-434-0666. If you need code study materials on a loan basis, contact Rick or Lil Marvin at 277-6741 or email them at [rlment@alaska.net](mailto:rlment@alaska.net). You will need to begin code study NOW in order to be ready for Gordon's class.

Good news for all of you hams who want new radios and equipment!! As of this writing, Dave Roddy of Radio Depot of Seattle, is planning on sending a representative, and a truckload of radios, to attend our Hamfest. Dave is still in the process of working out a few details of the trip, but it looks like it will be a go!

More good news!! Van and Carolyn Van Iderstine of VHS Amateur Supply out of Alabama will also be in attendance, with a contingent of antennas and other radio accessories. With these two companies together, all you hams and wanna-be hams will have a golden opportunity to outfit your shack.

For all you Augie Hiebert fans out there, Augie will be attending both the Hamfest, and the Hamfest banquet, as a guest speaker. Augie was the man who established both radio and television in the state of Alaska, as well as inventing the fax. Read the book Airwaves Over Alaska, Augie's biography by his daughter Robin Chlupach. Then come and meet Augie at the Hamfest and learn a lot about the history of communication in Alaska.

The American Radio Relay League's Northwest Division Director Greg Milnes W7OZ will be in attendance at the Hamfest. Greg is looking forward to his trip to Alaska and is especially interested in meeting with and talking to Alaska hams, learning about Alaska and hearing Alaskan hams' concerns regarding amateur radio. Come to the Hamfest and take the opportunity to meet Greg and learn about the ARRL and its latest doings. You might even learn a little amateur radio history, since Greg's family's interest and participation in amateur radio dates back to the 1920's.

For those of you who are interested in QRP operations (that's low power operations for those of you who still rely heavily on your amplifiers!), our own Jim Larsen AL7FS has offered to give a presentation on the very subject at the Hamfest. Learn how you can use low power and still talk all over the country and the world.

All this and more at the Anchorage Amateur Radio Club Hamfest on Saturday and Sunday, September 25th and 26th!! See you there!

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### **How to present Amateur Radio to officials**

*Jerry Wellman, W7SAR*

Enough of the madness! In six months, we'll have lived through the change from 1999 to 2000 - but until then, enough already!

I was in a hardware store recently and, get this, a rack of tools was advertised as Year 2000 compliant. At first I thought it a joke, but the minimum-wage clerk assured me that these tools came from the manufacturer as Y2K certified. My next thought was "how many dumb customers really believe this?" - as if a hammer or screwdriver knows the difference. Egad!

And that's not all. Other products also carry Y2K "certification" as if there was any governmental or private agency with such authority to determine such status. It's madness! But it must sell because of all the dollars spent trying to convince someone that a computer monitor, a mouse, a tire, or (get this) a food product is better because it's Y2K compliant.

Before I declare this column Y2K compliant I would hope that you're among a seemingly vast minority that understands what this is all about. I hope that you might bring a sane look at reality to your circle of influence concerning Y2K. If all else fails, please point out that Amateur Radio is hereby declared Y2K compliant. (By the way, this is the last you'll hear about Y2K in this column until next January - and then it will be a point out how all was well.)

### **The Image changes**

I fondly remember the first walkie-talkie I bought. It was a six-channel Wilson, it cost me a small fortune, worked well, and was attached to my belt whenever possible. I loved the attention it brought when someone noticed that I was carrying a radio. It was even better when I could use the radio and show anyone close by that I was an important person - I was licensed, I had a radio, and I was part of this vast hobby known for humanitarian service.

Last week my cell phone died and business took me some distance from home. Not wanting to be out of touch, I carried my tiny UHF portable. I asked my wife to listen during my commute so I could let her know I'd arrived safely and have someone to call if my 1984 Fiero broke down. So here I am in a software training class and I get a message to call the office. I ask where the nearest phone is and class instructor points to my radio and says, "Why don't you use your cell phone?"



When I tried to explain that it was an Amateur Radio transceiver, he looked at me with this blank stare, clearly not comprehending. Finally he directed me to a phone so I could make my call. I believe he just didn't want to have me make long-distance calls on his office phone.

During a break in the class later that day, I tried to talk Amateur Radio again with him as he was a fellow techie and seemed to like gadgets. He said, "Isn't Ham radio where you need big antennas and have radios with tubes in some messy closet?" He then described images in his mind of what Amateur Radio is all about. He had no concept of a tiny radio being Ham radio. He had never thought about how we offer service at ground zero of a disaster.

I got to thinking and wondered how many of our friends and associates think we're carrying around funny looking cell phones. Maybe they think we're wannabe cops and have noise, but we've either got the volume down or we're wearing an earphone so they don't understand that we use it to converse and make friends.

As I talked with the class instructor, it was clear that he'd never had someone take the time and show him what our hobby was all about. His vision was of glowing tubes, arcing power supplies, and strange antennae. Once we got beyond that image, he asked how he could get his license and my hope is now that he and I will visit on the air some day soon. Until our discussion last week, he had a skewed concept - one you and I need to make every effort to correct.

Consider also that he was not a public safety official, but how many police officers or agency officials share an improper image of what we can do. If they don't understand, they'll certainly not call you. But consider what they might think of someone carrying a portable radio.

I received e-mail from an operator bemoaning the fact that he had been turned away from a search mission. He was extolling the virtues of his ability to be of great benefit to the effort, but he said they were not allowing volunteers to help. I would bet that from his perspective he failed to notice that volunteers were being used, but came from within an established system, not what we call the 'convergent volunteer'.

Put yourself in a line officer's shoes and think about his or her perspective. You show up with a radio. You might have an ID card you prepared on your home computer. You might even have a badge showing your name and call sign. You might even have a police-type leather belt with assorted devices hanging on it. What does the officer think? Are you a police scanner enthusiast and drawn to excitement? Are you trying to impersonate an agency official?

If my computer system were down and someone showed up at the door with a fancy tool kit, there's no way I'd simply invite

them in to work on my system - no matter how well qualified they looked. I'll grant you that operating skills are essential. I won't buy into the assumption that being a good DX operator in any way matches an understanding of how a public service agency operates. I've been forcefully told that I should write and recognize the skills of the DX operator and promote this expertise as a value to an ARES operation. I'm willing to listen, but it will be a hard sell to convince me that knowing how to point a beam toward a far away place and the ability to work a pile up equates to knowing how the Incident Command System works.

Can you envision me calling the county emergency services officer and suggest having the ability to contact rare foreign stations is something beneficial during a hazardous materials evacuation? But truly folks, that's what some of you write and tell me by way of an excuse to avoid affiliating with and training with an ARES group or other public safety group.

Remember that the image a public service group or agency has of Amateur Radio is what YOU place there. If your introduction is a complex HF home station talking to Pacific Islands, that's the image that will be remembered. If you show you can talk to foreign stations, that will be remembered. If you saunter in with your police look-alike belt and badge, that's the image that sticks. If, on the other hand, you offer to assist with communication needs and demonstrate during and exercise you can fit into an emergency response role and meet the needs you'll be invited again and again.

### Recent disasters

Our newspaper system received hundreds of photos each day via satellite from several agencies such as Associated Press and Reuters. Following a disaster somewhere in the world I like to poke through the day's photos. For me, a certified news junkie, the satisfaction is seeing the photos that don't make the day's edition.

We also have a satellite system and I like to view the various TV station and network raw feeds from disaster spots. It's interesting to see what doesn't make the evening broadcast, for like a newspaper, there is always more news that can be printed or transmitted. A TV or newspaper editor decides what will be of interest to the viewer or reader and that may or may not include disaster images.

I was so pleased when a tornado aftermath photo included several volunteers, one of which was holding what I clearly noted was an Amateur Radio. Unfortunately the photo was a general cleanup shot and wasn't about communications so there was no identification of who the fellow was holding the radio. It was just nice to know you're out there, you're not often getting recognized for the service you do, but you're willing to get involved.



It's rare that the general media portrays the support side of the effort, but my hat is off to you who willingly get involved. Thank you for caring enough to take the time to help others.

### **Presenting yourself**

A reader asked for some advice in giving a presentation to city officials as to what Amateur Radio is all about. Several things came to mind.

First, be quick. You've got about three minutes to capture interest or you've lost the battle. Tailor your first three minutes to grab their attention. Your best bet is to research local hazards and disaster potential and develop a possible scenario, then explain what unique ways you can help them. Be specific.

Second, stick to non-technical facts. An agency isn't going to know what a yagi or a dipole is. They will appreciate that you can send error-free messages over somewhat secure channels. They'll not understand the words "pocket" or "node."

It's always good to involve your audience with an extremely brief scenario, such as asking the mayor how he or she would communicate with their own family if an earthquake hit right now. You could have your own family standing by directly if they're licensed operators or you could have an operator ready with a phone patch and give an example of how Amateur Radio works.

As you contemplate a presentation, ask yourself what do you want to convey to your audience and what your audience is expecting from you. Again, if they are considering you as a cop wannabe, avoid reinforcing that image. If they think you need big antennas and lowing tubes, demonstrate how your little radio operates through a wide area repeater network.

Don't be shy. Remember, you're the expert or they would not have you presenting to them. But don't be arrogant. You'll find great satisfaction in service and it's OK to tell your audience your motivation for wanting to be involved.

Good luck as you discover ways to serve others. I salute your willingness to teach and be taught and your efforts to be ready to respond. I thank those of you who have the opportunity to respond and valiantly represent this hobby we dearly love. Until next month, best wishes from Salt Lake City!

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### **Club call signs and the FCC Rick McCusker, WF6O**

Many amateurs have expressed frustration and have been puzzled by the club call system reintroduced by the FCC in 1995. During the past six months, I have also been perplexed and frustrated by a system that seems to be out of control.

Last November, I tried to obtain a certain 2x1 call for my own personal call. I was not successful in getting the call, which was assigned to a club. On the same day, another club vanity call was granted and assigned to the same individual. Being the curious kind, I checked the street address of the trustee listed and discovered he was the trustee for 12 clubs, with the majority being either 1x2 or 2x1 vanity call signs.

Someone holding 12 club calls piqued my interest, so I naturally started asking questions of amateurs in our local area. Many were familiar with the individual, as well as several others holding numerous calls. One amateur pointed out to me has 18 club calls, and is a very famous contester. Another, living in the Los Angeles area, has more than 40 calls.

As part of natural curiosity, I started checking the club calls listed in the QRZ online database "new hams" section of their daily update. One particular individual kept coming up as the trustee of numerous clubs established since December 1998. This amateur had established clubs in Washington, DC, New York City, Hawaii, Alaska, Guam and Saipan and American Samoa. I kept asking myself over and over again, "How can this guy afford to go to all of those meetings?"

Just to test the club call system, I filled out and sent 100 FCC form 610B's to establish 100 new clubs. I sent all of the applications in ONE envelope. After three weeks, I started checking the daily updates, looking for any of the bogus names I had picked out. After seven weeks had gone by without a single new club being listed, it was obvious I had gotten someone's attention.

On May 7<sup>th</sup>, I was talking to Riley Hollingsworth about an enforcement action in Northern California. When we finished our business, Mr. Hollingsworth asked me to explain the stack of 100 forms on his desk. I told him about the problems I suspected were taking root in the club call sign system. In particular, I pointed out Motoaki Uotome, W9BO, and his obtaining club calls and vanity calls at an alarming rate.

On May 11<sup>th</sup>, I received an email from Mr. Hollingsworth, stating that I had been correct about Mr. Uotome, and that he had just set aside 24 club calls recently granted to Mr. Uotome. In his letter to Mr. Uotome, Mr. Hollingsworth asks him to produce some paperwork about his clubs. Mr. Hollingsworth said, "Where you are claimin that they are used by clubs provide a list of the names, addresses and telephone numbers of the members, meeting times and dates within the past year, proposed meeting times and locations for the coming year, and copies of minutes, if any, taken at meetings within the last three months." Mr. Hollingsworth further states that failure to provide the information requested within 30 days will result in cancellation of all of the licenses.



Club call signs held by Mr. Uotome under investigation by the FCC are

KB3DRY, KB3DRZ, KB3DSA, KB3DSM, KC2EXC, KC2EYU, KC2EZB, KC2EZH, WH0ABM, WH2AOA, WH6DFK, WHGDFR, WH6DFV, WH6DFZ, K3MH, K7AH, KH0AW, KH2AW, KH2ZZ, KH8JA, KL7AR, KR6CW, WIBA, W3AN, W2AN, WH8A, WH7J, WH7AA, AJ1AA, KB3DLY, KH7WW, KH8J, NH7AA and WIBT

Mr. Hollingsworth is now aware of several other individuals holding numerous club calls, and will be investigating these case soon. I believe this is just the start of an effort to straighten out mess the club and vanity call sign systems have become

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### **Is CW dead? (conclusion)**

*Jack Kelleher, W4ZC*

The text of Part 1 in the May issue ended with this paragraph "Amateur First Grade applicants took written tests on radio laws, regulations and the proper adjustment and operation of equipment. The code sending and receiving tests, originally 5 wpm, increased to 10 wpm by 1919. Candidates for Amateur Second Grade, in contrast, certified to Radio Inspectors by mail that they could meet these requirements, but were unable to attend an examination. We now continue the text from the sidebar "Postscript: 80 Years of Licensing," from The FCC Rule Book, Complete Guide to the FCC Regulations Governing Amateur Radio," 1995 by The American Radio Relay League. (Incidentally, the quoted material from 80 Years of Licensing" was researched and written by Neil D. Friedman, N3DF.)

"until 1933, station and operator licenses were issued as separate diploma sized certificates. The type of station license held (originally General, Special or Restricted) determined permissible operating wavelengths and power

"In 1923, the Department of Commerce created the Amateur Extra First Grade, a license so special it was printed on pink paper! Only Amateur Extra First Grade licensees thereafter qualified for 'Special' station licenses, which had distinctive call signs and conveyed CW privileges on wavelengths longer than 200 meters

"Qualifications for the new class included two years experience as a licensed operator and a written examination that, among other items, required the applicant to diagram a transmitter and receiver and then explain their principles of operation. The code tests were given at 20 wpm, the speed required of Commercial First Class operators

"As amateur interests shifted to short waves, the Amateur Extra First Grade's popularity declined. Only six such licenses were issued in 1926 and the class was discontinued

the following year. Reinstated in 1928 with new privileges (described below) added in 1929, the class attracted several hundred licensees most years until its permanent deletion in 1933

"The Radio Act of 1927 transferred the power to issue station licensees to the Federal Radio Commission (FRC) while preserving the authority of the Commerce Department's Radio Division to issue operator licenses. Months later, the Radio Division redesigned the Amateur First and Second Grade classes as Amateur Class and Temporary Amateur, respectively. To First Grade licensees, the change meant little more than a new name. Temporary Amateur differed from the previous Second Grade, however, in that the former expired in one year and (after 1932) could not be renewed. Hams could no longer indefinitely avoid taking an examination

"In late 1929, the Radio Division began endorsing Amateur Extra First Grade licenses for 'unlimited radiotelephone privileges.' Initially, the endorsement authorized voice privileges on the 20-meter band. In 1932, the Endorsement became available to other amateurs having at least one year of experience, upon passing a special test on radiotelephone subjects. At the same time, phone use of 75 Meters was also reserved to holders of endorsed licenses

"The Radio Division merged with the FRC in 1932. A year later, the FRC completely revised the amateur regulation. Station and operator licenses were thereafter combined on single, wallet-sized card

"The amateur's basic license was endorsed as Class A, B or C. All three classes required code tests at 10 wpm (13 wpm after 1936). Class A conveyed exclusive phone use on 20 and 75 Meters. It required one year of prior experience and a written examination on radiotelephone and radiotelegraph theory and amateur regulations

"Classes B and C conveyed all privileges other than those reserved to Class A. The written test for those classes was less comprehensive than for Class A with regard to radiotelephone theory. The two classes differed in that Class C written examinations were furnished by mail to applicants residing at least 125 miles from the nearest FRC quarterly examining point. Class C code tests were administered by Class A and B licensees acting as volunteer examiners

"Amateur Extra First Grade licensees qualified for Class A privileges upon renewal. Amateur Class licensees were grandfathered into Class B. Temporary Amateur licenses could not be renewed, however, so holders of this Class had to qualify anew in Class B or C upon expiration of their licenses

### **The birth of the FCC**



"The Federal Communications Commission (FCC) succeeded the FRC with the passage of the Communications Act of 1934. It revised the regulations in 1951 to create the license-class names that are familiar today. Advanced, General and Conditional licenses replaced Classes A, B and C, respectively. The Advanced class was closed to new applicants in January 1953, although renewal of existing licenses continued. A month later, the 20 and 75-meter 'Class A Phone Bands' were opened to General and Conditional licensees.

"The same rule-making action created the Amateur Extra, Novice and Technician classes. The Extra class originally required two years' experience as a Conditional (or Class C) licensee or higher, code tests at 20 wpm and a theory examination more comprehensive than previously given for Class A. No exclusive privileges were reserved for the new class.

"The Technician ticket originally conveyed all amateur privileges above 220 MHz. Novices were originally restricted to CW operations on portions of the 11 and 80-meter bands, and voice at 145-147 MHz, at 75W input, using only crystal-controlled transmitters. The first Novice licenses expired after one year and could not be renewed. After 1954, Novice and Technician exams were obtained from the FCC by mail and administered by volunteer examiners. In 1976, the system changed again. Potential Technician-class licensees were required to appear before an FCC examiner, although many existing Technical licenses were grandfathered.

"A glimpse at our current regulations reveals that the licensing system has undergone many changes since 1951. Although it is beyond the scope here to examine them all, some of the most important have been the establishment of license upgrading incentives and the reopening of the Advanced class to new licensees in 1967, elimination of activity and code speed requirement for re-newal, the expansion and realignment of Novice and Technician privileges, notable in 1976, the increase of the Novice power level, the removal of the crystal control requirement and the merger of Conditional licenses into the General class in 1976, the extension of license terms to ten years in 1983, and Novice Enhancement in 1987.

#### **No-code Technician Class**

"on February 4, 1991, the FCC removed the code requirement from Technician-class license, creating the first codeless license in the U.S. Ever since the early days, the amateur service has been in a constant state of evolution, and there is every reason to believe that Amateur Radio of the future will look quite different.

*(Ed: One of my insertions for this story is the saying attributed to Alphonse Karr [1808-1890] "Plus va change,*

*plus c'est le meme chose" (The more things change, the more they remain the same)*

The demise of manual and machine-keyed CW is only a phase in the past and future of on-off (binary) modulation as differentiated from analog modulation. The Morse code was invented in the 1830s and was used, along with several other codes, for transmission of alpha-numeric information by wire (and later, via submarine cable). Most of these codes are described in Reference 1, below. Perhaps the most familiar of these codes was the Baudot code, which became synonymous with the teletype-writer. For a time after World War II many amateurs used WWII surplus Teletype machines for radio transmission using frequency shift keying of their transmitters and FSK adapters for reception. Nowadays this field has become highly sophisticated. My 1996 copy of the *ARRL Handbook* has a 34-page chapter (Chapter 7) on Digital Signal Theory and Components, and that doesn't include the latest entry in the field, PSK31.

#### **Bibliography**

- 1 "Ports O'Call, Volume 4," published by the Society of Wireless Pioneers in the mid-1970s, particularly an article "Codes of the World." An article assembled by SOWP member Donald DeNeuf, now deceased.
- 2 "From Semaphore to Satellite," published by The International Telecommunication Union, 1965.
- 3 "Two Hundred Meters and Down," The Story of Amateur Radio, Clinton B. DeSoto, then Assistant Secretary, ARRL 1936.
- 4 FCC/WT Docket 98-143, In the Matter of 1998 Biennial Regulatory Review - Amendment of Part 97 of the Commission's Amateur Service Rules. Notice of Proposed Rule Making. Adopted July 29, 1998, Released August 10, 1998.

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#### **FCC takes action Worldradio**

David Castle, WA9KJI, has received several warnings from the FCC about operations resulting in 'malicious interference' to several stations in the Amateur Radio service. As a result of continued violations, Mr. Castle has had his license modified to prohibit operation below 30 MHz for a period of 2 years.

As a result of failing to appear for retesting as ordered by the FCC, Rusty Leewright, KE6OUF, Joseph Santini, N2RGZ, and Joseph Walker, W8JCW have had their Amateur Radio licenses canceled.

Earlier this year, we reported on the problems on the K7IJ repeater system. Several amateurs in the Northern California received warning letters from the FCC in that case. The FCC



has now taken action against three of the amateurs accused of interfering with the K7IJ repeater, as well as the W6SEK repeater, also located in Northern California

Timothy Sheen, N6MZA, was monitored on the W6SKE repeater on May 24<sup>th</sup> causing interference on the repeater. The following day, Mr. Sheen called Riley Hollingsworth and apologized for the interference. On May 26<sup>th</sup>, his license was modified to prohibit transmitting on frequencies above 30 MHz for a period of 90 days. William Gifford, KF6URY, was also monitored causing interference on the same repeater, and has had his license modified. Mr. Jim Walker, formerly, KF6VAA, was also on the same repeater. His license was revoked in February. He received another warning letter from the FCC.

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### **Adding Receiver Incremental Tuning (RIT) to the SW40+ QRP Transceiver**

**by Jim Larsen - AL7FS AK/QRP #003**

Visit the Alaska QRP Club HomePage at  
<http://home.gci.net/~bhopskins/akqrp>

In an earlier article I discussed building an 80, 40 or 20 meters superheterodyne (superhet) CW transceiver (2 watts). The theory within the radio was covered in an online course called Elmer 101 and was published in QRPP (NorCal QRP Club). This radio is from Small Wonder Labs and is called the SW40+ (mine is for 40 meters). (If you can access the referenced material at the end of this article, you will find a wealth of additional information including the SW40+, schematic, kits, and other items mentioned in this article.)

#### **The RIT Upgrade**

I recently decided I needed the Receiver Incremental Tuning (RIT) add-on for the SW40+ transceiver that I use for business travel trips. I ordered the kit and shortly thereafter, I was melting solder and building up the small PC board RIT. After the modification, I found that my frequency range had changed from 7 009-7 044 down to 7 009 to 7 033. This was what was predicted in the RIT Instructions.

I began to tack on capacitors to the bottom of the board to change the value of C8. I followed the range suggestions in the Instructions sheet but nothing I did seemed to improve the tuning range. I finally gave up on C8 and left it at the stock value even though my tuning range was still reduced.

Again, per the Instructions, I changed C7 (68 pf in my case) to move the range back up the band. I chose to use the next smallest value in my parts drawer (56 pf - I did not go all the way down to the 47 pf in the chart in the SW40+ manual) to give me a range of 7 0226 to 2 047. (Thank you, NorCal Capacitor Kit.) I also tweaked on the spacing on L1 to help bring the range closer to what I needed. I decided this new range was ok as I seldom use my extra class privileges and it gave me a more even spread on the dial. The RIT works as advertised and I am sure I will enjoy this when I call CQ and

have to tune around for stations. I have found stations off frequency by over 1 kHz from time-to-time.

There are no new contacts with the SW40+/RIT but I expect some on my next business trip to the Lower 48. This is primarily my travel rig. The power output to a slightly mismatched inverted-V antenna reads 2.8 watts on the Oak Hills Research, OHR WM-2 wattmeter. I suspect it would read closer to 2 watts into a 50 ohm load.

For you Spartan Sprint folks, the SW40+ with the RIT now weighs 11 ounces. I have the SW40+ custom case. Batteries are 8 ounces, Micro-Key is 1 ounce, and Kenwood earbuds are only an ounce or two. The next addition to the SW40+ will be a built-in Tick Keyer. With all these upgrades, I now just need to be in the Lower 48 for a Spartan Sprint.

73, Jim <mailto:al7fs@qsl.net> web site at  
<http://www.qsl.net/AL7FS/>

#### **References**

SW40+ transceiver

[http://smallwonderlabs.com/swl\\_swp.htm](http://smallwonderlabs.com/swl_swp.htm)

Receiver Incremental Tuning (RIT) add-on

[http://smallwonderlabs.com/swl\\_rit.htm](http://smallwonderlabs.com/swl_rit.htm)

SW40+ Schematic

<http://www.qsl.net/k5fo/schematic.jpg>

NorCal Capacitor Kit and QRPP

<http://www.fix.net/~jparker/norcal.html>

Spartan Sprint <http://www.natworld.com/ars/>

TICK Keyers <http://www.frontiernet.net/~embres/>

Oak Hills Research <http://www.ohr.com/>

Elmer Projects for QRP-L <http://www.qsl.net/k5fo/>

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### **NO JOY ON 2-METER TRANSATLANTIC ATTEMPT**

*The ARRL Letter Vol. 18, No. 28*

*July 16, 1999*

An effort to make the first transatlantic QSO on 2 meters has come up dry. The attempt by teams in Newfoundland and Scotland to confirm a transatlantic contact on 144 MHz and secure the Irish Radio Transmitters Society's Brendan Trophies ended a day early on July 3. The attempts began June 26. "We operated until Saturday July 3 as the UK team wanted to get their gear down as bad weather was setting in," said Paul Piercey, VO1HE, the leader of the Newfoundland team. "There was nothing heard, but a couple reports of others listening were received." Piercey's group operated from St. John's, Newfoundland, using the call sign VO1AA. The station was set up in Cabot Tower, where Marconi received the first transatlantic signal in 1901. The Scottish group, led by Bill Ward, GM0ICF, operated from Ardnamurchan Lighthouse on Ardnamurchan Point—the most westerly point in the mainland British Isles. The group used the call sign 2S0ICF/P. The IRTS's Brendan Trophies will be awarded to the first two stations to make a verified contact across the Atlantic Ocean using 144-146 MHz without aid of manmade reflectors, repeaters or moonbounce.



## AMRAD CONTINUES LF EXPERIMENTS

*The ARRL Letter Vol. 18, No. 28*

*July 16, 1999*

Slow-speed beacon transmissions from the Washington, DC, area at 136.75 kHz under the call sign WA2XTF have been on the air continuously since May from the QTH of WB3KDU in Vienna, Virginia. The activity is being conducted under the Part 5 Experimental License issued to the Amateur Radio Research and Development Corporation to test the waters on 136 kHz. So far, reception reports have been received from amateurs near Washington, DC.

In March, the FCC granted a one-year experimental license to AMRAD to conduct tests using WA2XTF on 136.75 kHz from twelve sites in Northern Virginia. These experiments are to gain experience in anticipation that the FCC may allocate the low-frequency band 135.7-137.8 kHz to the Amateur Radio Service in the US. Several other countries already have an LF allocation at 136 kHz.

Last October, the ARRL petitioned the FCC to create two amateur LF allocations at 135.7-137.8 kHz and 160-190 kHz. The League asked for a 200 W PEP power limit (no more than 2W EIRP) and asked that the new bands be made available to those holding a General class or higher license. The League proposed permitting CW, SSB, RTTY/data, and image emissions. Its petition was designated RM-9404.

The installation at the WB3KDU experimental site has been a team effort using a ROPEX "The First" transmitter, a homebrew antenna system, and bits and pieces from various members' collections. After about a month of operation from this initial station, others authorized under the Part 5 license got serious about gathering the parts to put their own stations on the air. AMRAD participants were able to locate some large inductors and capacitors not normally part of HF/VHF junk boxes during the recent Dayton Hamvention.

While the list of stations is closed and new transmitting stations cannot be added, others are invited to join the project by listening and reporting results. Reception reports should be sent via e-mail to Andre Kesteloot, N4ICK, [n4ick@amrad.org](mailto:n4ick@amrad.org). More information is available about this experimental operation at the AMRAD Web site, <http://www.amrad.org/>—AMRAD Newsletter.

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## ARLB046 FCC Delays Universal Licensing System for Amateur Radio

*ARRL Bulletin 46 ARLB046*

*July 16, 1999*

To all radio amateurs

Ham radio will not become part of the FCC's new Universal Licensing System until August 16. The FCC has postponed ULS deployment for the Amateur Service for two weeks while it deals with several issues raised over the past few weeks by

Volunteer Examiner Coordinators and others. The ULS was to have gone into effect for hams starting August 2.

The FCC also said that any amateur licensee telephone numbers the FCC collects or already has collected will not be made available to the public. Supplying a telephone number, fax number or e-mail address when registering for or using the ULS is optional. The FCC will issue a Public Notice soon that will outline transition issues, filing instructions and other information.

The FCC already has warned that applicants should anticipate processing delays during the first couple of weeks the ULS is in effect. In addition, daily amateur database updates may not be posted to the Internet until all the kinks are worked out. Registration in the ULS is required in order to receive FCC services in the future. Individuals eligible to hold a Social Security Number must provide this number to the FCC in order to be registered in the ULS. To register, visit <http://www.fcc.gov/wtb/uls> and click on "TIN/Call Sign Registration."

For more information and frequently asked questions about the impending ULS, visit <http://www.arrl.org/arrivec/ulstext.html>.

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## FLORIDA MAN FINED \$20,000 IN AMATEUR RADIO-RELATED CASE

*The ARRL Letter Vol. 18, No. 28*

*July 16, 1999*

The FCC has levied a \$20,000 fine on a Florida man for violations stemming from alleged unlicensed operation on Amateur Radio frequencies. The FCC's Tampa Field Office has sent a Notice of Apparent Liability to William Flippo of Jupiter. Flippo is accused of willful operation of an unlicensed radio station on 28.375 MHz, willful and malicious interference with ongoing Amateur Radio communications, and with failing to let FCC representatives inspect his radio equipment. All of the alleged violations are said to have occurred June 8, 1999.

The FCC's Compliance and Information Bureau has been investigating complaints from hams in the Jupiter area for nearly two years. According to the FCC, the hams identified Flippo—a CB operator known as "Rabbit Ears"—as the source of intentional interference to ham communication. One ham in the area says the local amateur community had "for many months" been experiencing deliberate interference problems on 10 meters as well as on a local 2-meter repeater, although the FCC did not cite Flippo for any violations involving 2 meters.

Local hams also provided the Commission with audio tapes and the results of close-in monitoring and direction finding.



the FCC said. On the basis of the "evidence at hand," Flippo got an FCC warning last February from the Tampa Field Office, advising him of the allegations and warning that a fine could result. The following month, Flippo "categorically" denied the allegations in the warning letter, but hams in the Jupiter area said the intentional QRMing ceased for a while.

When renewed complaints from hams arose this spring, an FCC agent traveled to Jupiter to investigate. The agent used direction-finding techniques to determine that intentional interference to amateur traffic "was occurring and that the intentional interference was being transmitted from the residence of William Flippo."

"The FCC says the agent monitored and heard taped portions of a 2-meter ham radio net earlier that day being replayed on top of amateur communications on 10 meters" in an attempt to intentionally disrupt and interfere with those communications."

The FCC agent, accompanied by a local sheriff's deputy, attempted to inspect the radio equipment at Flippo's residence on June 8, but Flippo reportedly refused to allow the inspection. Flippo has 30 days to respond to the FCC Notice, sent July 12 by FCC Tampa District Director Ralph M. Barlow.

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#### OCTOBER COURT DATE SET IN KV4FZ RENEWAL CASE

*The ARRL Letter Vol. 18, No. 28  
July 16, 1999*

Herbert L. Schoenbohm, KV4FZ, will get his day in court this fall in his fight to retain his Amateur Radio license. Last summer, the FCC upheld the supplemental initial decision of an administrative law judge denying Schoenbohm's application to renew his Amateur Radio license. In October, the FCC reaffirmed that finding and denied Schoenbohm's petition for reconsideration in the case, which has slogged through the administrative process since 1995. Schoenbohm has appealed.

The next step is oral arguments, set for October 18 in the United States Court of Appeals for the District of Columbia Circuit. That court hears all appeals from federal agencies on adjudicatory matters.

ALJ Edward Luton had found that Schoenbohm, of Kingshill, Virgin Islands, had "engaged in misrepresentation and lacked candor" in testifying about his 1992 felony telephone toll fraud conviction and his solicitation of ex parte presentations. Schoenbohm, now 59, was convicted in federal court in 1992 of fraudulently using a counterfeit access device to obtain long-distance telephone service. He served two months confinement plus two years of probation. The FCC also said

he solicited others, using Amateur Radio, to make ex parte presentations on his behalf, in violation of FCC rules. The FCC said his behavior, in combination with his fraud conviction, justified nonrenewal of his ham ticket. Schoenbohm has been trying to renew his ham ticket for the past four years. He maintains that the FCC should renew his license because his conviction was several years ago, his sentence light, and he's had a spotless record and been fully rehabilitated. The FCC disagrees, however, saying that Schoenbohm "has not demonstrated that he possesses the basic character traits of truthfulness and reliability that are essential to licenseship."

A brief filed May 10 on Schoenbohm's behalf by his attorney Lauren A. Colby argues that Schoenbohm's criminal conviction does not merit denial of his license renewal, that Schoenbohm did not violate FCC ex parte rules, and that he did not lie to the Commission. Colby asks the court to remand the case to the FCC with instructions to grant the renewal. The FCC was expected to file its brief in the case July 15. Schoenbohm's license expired in 1995, and his call sign no longer appears in the FCC database. However, he has been allowed to continue operating as KV4FZ until his administrative and judicial appeals are exhausted.

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#### ARISS EQUIPMENT TAKES ANOTHER STEP TOWARD ISS

*The ARRL Letter Vol. 18, No. 28 July 16, 1999*

The equipment that will become the first Amateur Radio station on the International Space Station has completed a significant milestone in anticipation of its journey into space later this year. Following exhaustive qualification testing at NASA's Goddard Space Flight Center, the radios, TNC, power supplies, and connecting harnesses for the initial transportable ARISS ham station are on their way to Kennedy Space Center for launch this December during shuttle mission STS-101.

"The first set of flight hardware for Amateur Radio on the International Space Station (ARISS) project has passed all its tests and is on its way to Kennedy Space Center," said Will Marchant, KC6ROL. Marchant credited "a tremendous amount of work by Frank Bauer, KA3HDO, and his team of volunteers at Goddard Space Flight Center" for getting the qualification testing done. Marchant said the hardware was shipped to Kennedy Space Center July 9.

AMSAT President Keith Baker, KB1SF, expressed his thanks and appreciation on behalf of AMSAT for getting the initial ham gear through qualification testing. The initial ham gear—primarily Ericsson commercial-grade handheld transceivers—will support amateur operation from the ISS voice and AFSK packet on 2 meters and 70 cm. The equipment package includes one 6 W VHF and one 4 W UHF



transceiver plus an interconnecting box to distribute audio and power and a 1200-baud packet TNC Marchant said the gear will provide the ISS with Amateur Radio capability similar to the voice and packet currently available to cosmonauts aboard the Russian Mir space station

More sophisticated transportable ham gear will be delivered in late 2000 or early 2001. A rack-mounted permanent station is expected to be launched in 2003 or 2004. An externally mounted "microsatellite-like" station will launch in that time frame as well, Marchant said. The ARISS external antennas will be mounted on the outside of the ISS Service module during a space walk scheduled for STS-101. Ultimately, four external antennas will be flown to support amateur communication on HF, VHF, UHF, L band (including GPS receive) and S band.

Qualification testing--sometimes called "shake-and-bake testing"--is required of all equipment bound for the ISS or used in manned spaceflight. The detailed, rigorous testing sequences are aimed at ensuring crew safety and minimizing equipment failure.

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#### **It's Taps For U.S. Telegraph - Last Dots Dashed Out**

By Andrew Quinn

SAN FRANCISCO (Reuters) - It's finally taps for U.S. ship-to-shore telegraph, drowned out by the high-speed chattering of satellite communications, high frequency radios and e-mail.

Globe Wireless, an 89-year-old California communications company, Monday sent out what it billed as the last commercial maritime Morse Code message from North America, a terse sign-off that repeated the first words transmitted by the telegraph's inventor, Samuel F.B. Morse, 155 years ago: "What hath God wrought?"

The message, sent from Globe Wireless' KFS Marine station at Half Moon Bay south of San Francisco, marked a muffled end to the U.S. tradition of commercial radio telegraphy, famous for the dots and dashes of Morse Code, company official Tim Gorman said Tuesday.

"The satellite started coming in in the early 1980s, and there were great advances in voice radio and radio telex," Gorman told Reuters. "But there was nothing over all those years that could replace Morse Code for its simplicity and reliability." Globe Wireless gathered several old-time telegraph operators for a small ceremony marking the event, the gleaming telegraph key now surrounded by banks of computers and video screens used for more modern forms of communications.

"It's a sad event for me, but I know it's for the best," said Dalton Bergstedt, 92, a one-time manager of the Half Moon Bay facility. "It will improve maritime communications (to be) much better than they ever were."

After Morse invented the telegraph, he devised Morse code for use with his new invention. In 1844, testing the new system, he telegraphed the words "What hath God wrought?" from Washington D.C. to an assistant in Baltimore. The telegraph and Morse Code quickly became the backbone of long-distance communications around the globe. Perhaps the most famous single Morse Code message was the distress call sent by the foundering Titanic in 1912 - "Come at once. We have struck an iceberg."

As maritime traffic rose and through two World Wars, the simple telegraph, known as "continuous wave" or "CW" transmission to the experts, remained a spare, cheap and effective means of communicating across vast distances. "If there's static and you get only half the letters in a Morse Code message you can still make it out, but if you only hear half a conversation, that's no good," said Gorman, who began working at KFS Marine in the late 1970s.

Nevertheless, the last three decades have seen a major shift in maritime communication, and the radio telegraph's fate was sealed when the International Marine Organization, a U.N. agency, ordered commercial ships to replace the telegraph with new technology dubbed the Global Marine Distress and Safety System by February 1, 2000.

Instead of typing out the dots and dashes of the famous "SOS" signal, communications officers on modern ships can simply push a button indicating a specific problem: sinking, capsizing, dead in the water.

Morse Code and the radio telegraph are currently used only by smaller ships from developing countries, as well as certain Russian and Chinese vessels, Gorman said.

The Globe Wireless station at Half Moon Bay, as well as other former commercial radio telegraph facilities already taken off line, will now be used for the company's new communications product - GlobeEmail, company officials said.

Gorman said that before the final sign-off, KFS Marine did relay one last telegram from the National Liberty Ship Memorial, the SS Jeremiah O'Brien, in San Francisco Bay to President Clinton in the White House.

"The message was 95 words, and it took me six or eight minutes to copy it," said Gorman, who took down the Morse Code message from the ship. "Then I just transmitted it to the White House via e-mail."

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#### **WHY AN AMATEUR RADIO OPERATOR IS CALLED**

**A HAM** Gerry Crenshaw, WD4BIS, Garland, Texas

*(This was previously published in the Amateur Radio Communicator MARCH/APRIL 1994)*

Have you ever wondered why we radio amateurs are called "HAMs"? Well, according to the Northern Ohio Radio Society, it goes like this: the word Ham was applied in 1908 and was the call letters of one of the first Amateur wireless stations operated by some members of the HARVARD RADIO CLUB. There were Albert S. Hyman, Bob Almy and



Peggy Murray At first they called their station Hyman-Almy-Murray Tapping out such a long name in code soon called for a revision and they changed it to HY-AL-MU, using the first two letters of each name

Early in 1909, some confusion resulted between signals from Amateur wireless HYALMU and a Mexican ship named HYALMO, so they decided to use only the first letter of each name and the call became HAM

In the early pioneer unregulated days of radio, Amateur operators picked their own frequency and call letters Then, as now, some Amateurs had better signals than some commercial stations The resulting interference finally came to the attention of congressional committees in Washington and they gave much time to proposed legislation designed to critically limit Amateur activity

In 1911, Albert Hyman chose the controversial Wireless Regulation Bill as the topic for his thesis at Harvard His instructor insisted that a copy be sent to Senator David I Walsh, a member of one of the committees hearing the bill The Senator was so impressed, he sent for Hyman to appear before the committee He was put on the stand and described how the little Amateur station was built He almost cried when he told the crowded committee room that if the bill went through, they would have to close up the station because they could not afford the license fees and all the other requirements that were set up in the bill

The debate started and the little station HAM became a symbol of all the little Amateur stations in the country crying out to be saved from menace and greed of the big commercial stations who did not want them around Finally, the bill got to the floor of Congress and every speaker talked about the poor little station "HAM"

That's how it all started You will find the whole story in the Congressional Record Nationwide publicity associated station HAM with Amateurs From that day to this, and probably to the end of time, in radio, an Amateur is a HAM

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**AARC Facilities Support Work Needs Volunteers:**  
as of July 8, 1999 from Doug KL7IKX

**Icom standby repeater:** needs someone to install equipment in cabinet, Install battery in the cabinet, Install charger for battery in cabinet, Interface new controller card to the repeater to allow DTMF control and telephone interface as required, make up cables from repeater to battery and RF cables (double shielded) from radio to duplexer

**KL7AA Amateur Television Repeater:** One or more individuals to install equipment in mobile video facility, Complete wiring of trailer, Complete Wiring of ATV equipment, Re-tune Transmitter to new ATV frequency, re-tune sideband filter and diplexer to new frequency The retuning of diplexer and transmitter can be handled by

Tech staff, but they need to have the gear ready for shop visit, and ready to be plugged back in for operation

**KL7AA-6 Weather BBS:** One or more individuals with Internet access as well as VHF or UHF packet capabilities to daily upload to the BBS the latest NWS forecasts, the latest ADES daily bulletins, and check to be sure any incoming severe weather warnings are passed on to the appropriate agencies A new location also required for the BBS equipment and needs to be in the line of site with DD/DPD location to allow for full duplex link into the network (Almost anywhere but the extreme east of Muldoon should do ) The BBS is self sufficient, but it might require an occasional re-boot But has run reliably for six months now without a burp

**KL7ION repeater 147.30** requires a visit to the building roof once a year to be sure cables and mounting hardware are secure Will need people who are not afraid of heights A ladder is provided, personal safety gear not

\* this project will require prior coordination, as site is secure \*

**KL7AA repeaters 146.94 , 224.94, 444.70** require a visit to the top of the tower once a year to confirm cable and hardware are secure No climbing belt provided Tower has ladder, however a belt is required for safety \* this project will require prior coordination as site is secure \*

**KL7AA Alyeska repeater 146.76** -- requires visit to site once a year to perform maintenance Check battery and charger, Check Heliax and interconnecting cables \* this project will require prior coordination as site transportation must be scheduled \*

**KL7AA-1 packet node 145.01 at Rabbit Creek AT&T site:** Requires visit to site once a year to service check equipment, the tower has ladder, however a safety belt required \* this project will require prior coordination as site is secure \*

**KL7AA-4 - Weather link:** Occasional tower access required to re-orient antenna's when Weather BBS is moved

If you can assist on any or all of these projects please contact the technical committee Many of the building projects require you be more than casually familiar with electronic circuits, schematics, and wiring Knowing which end of the soldering iron gets hot is also recommended Contact KL7IKX - Doug (346-1822) or KL7YF - Rick (277-6741)

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Talk-in on 146.34/94 (PL 100 or 141.3)





## The Anchorage Amateur Radio Club News

Anchorage Amateur Radio Club, Inc  
1st Office Box 101987  
Anchorage, Alaska 99510-1987

Bulk Rate  
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Roger Hansen KL7HFQ L036  
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Big Lake AK 99652-0343



### The connector battle rages on: Molex Anderson, T-type, alligator clips: selected comments from ARES-RACES reflector

Many years ago Duane Hansen N2ADJ and the late K2JXU researched the best all around method of connecting mobile/portable units to 12 V DC sources. We came up with insulated (red and black) Muller #63 alligator clips. I, too, have alligator clips in my emergency kit. Everyone should. They are readily available and are probably the most adaptable connector, especially on the fly, but generally I've been using the Anderson's on all of my portable equipment (HT's, gel cells, TNCs). I feel the Andersons provide a quick and very secure connection, no danger of exposed metal, and automatic polarity alignment (assuming you follow the red+/black- convention through out your wiring -J). They're a pleasure to work with. I've also built a variety of Andersons "adapters" to provide power in or out -- Andersons on one end and something else on the other, e.g. alligator clips, Molex connectors in the ARRL recommended configuration, 9V battery clip, barrel-type DC power connectors, terminal connectors (spade, ring, quick disconnects), etc. In essence, I've made the Anderson the "universal" to which any power supplier or any power drawer can connect.

Ralph Milnes, KC2RLM writes: As I think everyone on the reflector understands, you try to prepare for all situations by having a variety of connectors -- Molex, alligator clips -- but I would recommend that everyone look at the Andersons, too. I'm sold on them, even if they are a little harder to locate.

Howard KB8ALM writes: For the past few years I have been in favor of using the new T Type of power connector (actually two 1/4 blade terminals in 90 degree offset position) as found on the newer 2-Meter mobile radios as the low (10-15 Amp) power connector. And the 6 pin (only 4 used) connector for high power (20-25 Amp) which seems to now be the standard for amateur HF radios. (This one seems to be a proprietary Molex Plug). The only problem is that I am unable to find them OEM (NAKED, unassembled, without pigtailed, with the positive latch) and cannot find both sides of the HF type at all. Thus my dilemma, whatever connector is used, it must be able to do the job and it must be readily available to all. Seems like a national decision on what to use and an inexpensive source must be made available. I still like them T Types, guess the radio manufacturers do also, they seem to be going to using them. Another advantage is that chances are that your new radio will have one attached already, you won't have to change it!

the Editor's 2 cents: I like Molex, easy, cheap and none of my HT's or mobiles draw more than 15 amps!